WE CLAIM:

1. An improved copper chromite catalyst having the molar composition

$$Cu_{(a)}Cr_{(b)}Al_{(c)}Zn_{(d)}$$

wherein a = 10 – 40 mole %
b = 10 – 40 mole %
c = 10 – 30 mole %
d = 5 – 40 mole %

and a + b + c + d = 100

and characterised by XRD pattern as shown in table 1

Table I: XRD analysis of the copper chromite catalyst

θ	Intensity (%)
18	100
26.2	100
27.4	48
35.8	92
44.2	48

56.6	44

2. A process for the preparation of an improved copper chromite catalyst having the molar composition

$$Cu_{(a)}Cr_{(b)}Al_{(c)}Zn_{(d)}$$

wherein a = 10 – 40 mole %
b = 10 – 40 mole %
c = 10 – 30 mole %
d = 5 – 40 mole %

and a + b + c + d = 100

and characterised by XRD pattern as shown in table 1

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56.6	44

which comprises preparing aqueous solutions of source of copper, a source of aluminium and a source of zinc, adding to this mixture a solution of source of chromium, under stirring conditions to obtain the precipitate, separating the precipitate by conventional methods, drying the precipitate at a temperature ranging between 80 to 110 °C, calcining the dried material in static air at a temperature ranging between 200 to 500 °C for a period ranging between 2 to 5 hrs., to obtain the